

REMARKS

Reconsideration of this application as amended is respectfully requested.

In the Office Action, claims 1-10 were pending and rejected. The Abstract of the application was objected to. In this response, no claim has been canceled. Claims 1 and 5 have been amended. The abstract of the application has been amended. In addition, new claims 16-20 have been added. Thus, claims 1-10 and 16-20 remain pending. No new matter has been added.

The information disclosure statement (IDS) filed June 30, 2003 was objected to because the PTO-1449 form was not found. Applicant has attached a copy of the IDS filed June 30, 2003 for the convenience of the Examiner. It is respectfully requested that the Examiner consider those references cited in the IDS.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Chiang et al. (Managing Flash Memory in Personal Communication Devices, 1997) (herein after "Chiang").

It is respectfully submitted that claims 1-10 and 16-20 include limitations that are not disclosed or suggested by Chiang. Specifically, independent claim 1 recites as follows:

1. A method of storing objects in a nonvolatile memory comprising:
allocating a space within a block of an erasable nonvolatile memory for an object, wherein the allocated space is within a single block of the erasable nonvolatile memory and the allocated space includes a plurality of areas capable of storing multiple instances of the object;
storing a first instance of the object in one of the areas within the allocated space;
storing a superseding second instance of the object in another one of the areas within the allocated space without erasing any of the allocated space; and
for each of the first and second instances of the object, storing status information corresponding to the respective instance of the object within the allocated space which is within the single block of the erasable nonvolatile memory.

(Emphasis added)

Independent claim 1 includes limitations that storing a first instance of data in an area of a block of erasable nonvolatile memory (e.g., a flash memory block) and store a second instance of the data in another area within the same block without having to erase the first instance. That is, the instance of data can be changed without having to perform an erase operation, where the multiple instances of data are processed within the same block. Thus, since the multiple instances of the data are stored within the same block, the memory controller can access these instances quickly because the addresses of these instances are relatively closed (e.g., probably having the same row address). It is respectfully submitted that these limitations are absent from Chiang. Although Chiang discloses a non-in-place-update scheme, Chiang fails to disclose or suggest such a scheme may be implemented with the same erasable non-volatile memory block.

In addition, independent claim 1 includes limitations that for each of the instances stored within the same block status information corresponding to the respective instance is also stored within the same block. It is respectfully submitted that this limitation is also absent from Chiang. Therefore, for the reasons discussed above, it is respectfully submitted that independent claim 1 is not anticipated by Chiang.

Similarly, independent claims 5 and 19-20 include the limitations similar to those recited in claim 1. Thus for the reasons similar to those discussed above, independent claims 5 and 19-20 are not anticipated by Chiang.

Given that dependent claims 2-4, 6-10, and 16-18 depend from one of the above independent claims, it is respectfully submitted that claims 2-4, 6-10, and 16-18 are not anticipated by Chiang. Withdrawal of the rejections is respectfully requested.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chiang.
In view of the foregoing amendments, it is respectfully submitted that the rejections have been overcome.


With respect to claims 6-10, although Chiang discloses fragmentation of the memory storage, Chiang fails to disclose or suggest the fragmentation being performed in a manner recited in claims 6-10. In order to render a claim obvious, each of the limitations recited in the claim must be taught or suggested by the cited references. It is respectfully submitted that Chiang fails to disclose or suggest the limitations recited in claims 6-10. Therefore, in addition to those applied to their independent claim 5, for the reasons discussed above, it is respectfully submitted that claims 6-10 are patentable over Chiang. Withdrawal of the rejections is respectfully requested.

In view of the foregoing, Applicant respectfully submits the present application is now in condition for allowance. If the Examiner believes a telephone conference would expedite or assist in the allowance of the present application, the Examiner is invited to call the undersigned attorney at (408) 720-8300.

Please charge Deposit Account No. 02-2666 for any shortage of fees in connection with this response.

Respectfully submitted,
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